830313 0788 ©

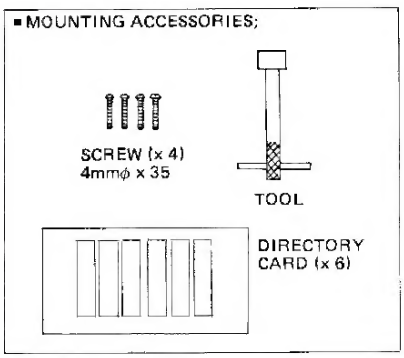
AIPHONE

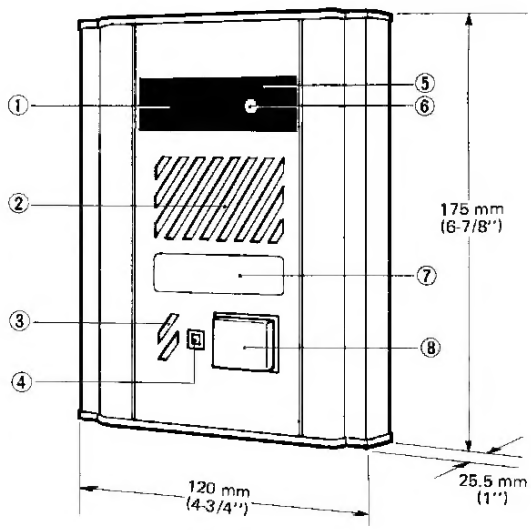
VIDEO DOOR STATION

MODEL: MC-D

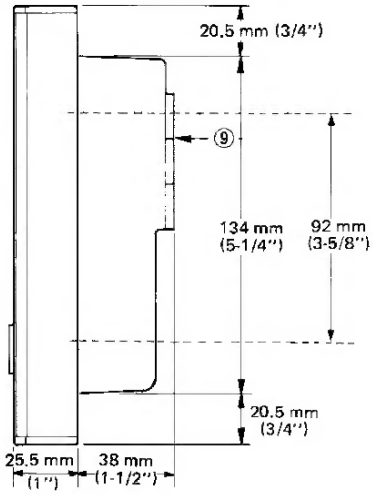
Door station with CCD camera, surface-mount

INSTALLATION MANUAL





MC-D



SIDE VIEW

1 NAMES AND FUNCTIONS

① **CCD** camera
② Speaker
③ Microphone
④ Location indicator LED (red)
⑤ Infrared LEDs
⑥ Camera ON indicator LED (green)
⑦ Directory card
⑧ CALL button
⑨ Terminal section

2 FEATURES

* MC-D is a video door station for use with MC-U/MCH-U video monitor and IC-series Chime Tone Intercom: either IC-1AD(U), IC-1GD(U)/A or IC-2AD(U)/A or TD-H selective call intercom system.
* MC-D can be used as a surveillance camera, using MCW-P3, 3-camera adaptor (with video monitoring capability for up to 3 locations). Can be installed max. one MC-D & two surveillance cameras for MCW-P3/IC-1GD(U)/A system, and max. two MC-D and one surveillance camera for MCW-P3/IC-2AD(U)/A system.
* Employs **CCD** (Charge-coupled device) camera, featuring;
  1. almost permanent life of camera unit,
  2. no possibility of being damaged by strong light,
  3. more compact and lighter weight,
  4. low current circuitry,
  5. clear picture by higher resolution,
  6. no after-image created,
  7. picture less distorted, as not so affected by magnetic and electrostatic field,
  8. auto-iris sensitivity adjustment,
  9. maintenance-free, as periodical replacement of vidicon has been eliminated.
* Weather-resistant type.
* Camera lens is protected by vandal-resistant shield. Front panel is of anodized aluminum with tamper-proof screw.
* The camera has wide-angle lens, capturing image from 25 cm to 5 m (10" to 16').
* Either semi-flush or surface mounting (MCW-R surface mounting box supplied by AIPHONE).
* Simple wiring. One coaxial cable plus single pair.
* MAW-B relay box for auxiliary light to illuminate the caller from the front (to improve backlight phenomenon).

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3 BEFORE YOU OPERATE AND INSTALL THE EQUIPMENT
– Prohibitions and precautions –

OPERATION;

DO NOT HOLD HOOK SWITCH DOWN WHILE PICKING UP HANDSET. THE CHIME TONE SOUNDS THRU THE HANDSET RECEIVER ELEMENT AND COULD CAUSE HEARING DAMAGE.

INSTALLATION;

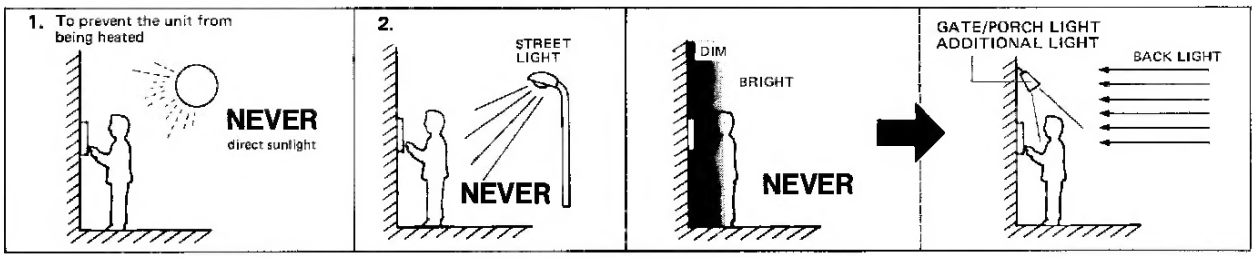
1. **DO NOT CONNECT ANY TERMINAL ON ANY UNIT TO AC POWER LINES.** When you mount MC units in place of existing bell or chime, be sure to disconnect wires from the present transformer.
2. **DO NOT OPEN THE MC-D UNIT, WITHOUT FIRST REMOVING PLUG OF PS-24N POWER SUPPLY FROM AC OUTLET.**
3. Do not drop or apply mechanical shocks which may damage the CCD unit.
4. Avoid running the connecting wires thru doors, windows or between furniture, which may pinch and disconnect the wires.

INSTALLATION LOCATION REQUIREMENTS

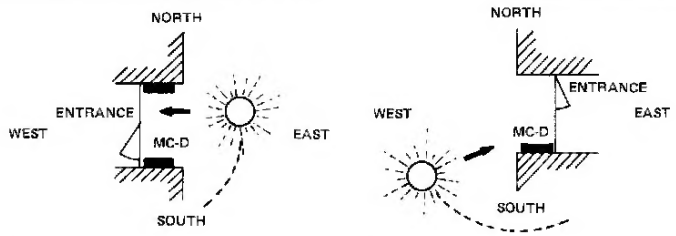
Select the MC-D installation location, observing the following conditions.

1. Avoid to install MC-D in the locations that would be exposed to direct sunlight, temperature/humidity extremes, water, oil, dust, iron dust, inflammable and chemical products, etc.
2. If the strong light source is behind the person standing at the door station and there is not illuminating lamp spotlighting the face, the face will appear dark on the room station monitors. This situation can occur when buildings create shadows on entry areas.
   If gate/porch light is not provided, a separate illumination light must be installed to prevent the above and/or to illuminate the caller during night. The AIPHONE Relay Unit MAW-B is available, to turn on the illumination light when the caller presses call button on the MC-D station.
   (For installation information, see the Instructions packed with MAW-B unit).

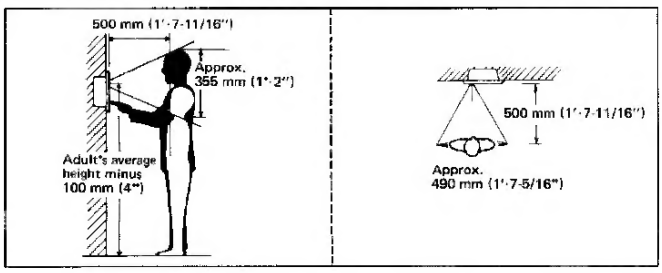
   NOTE: While MC-D is exposed to direct sunlight or strong light (approx. 30,000 lux), the auto-iris is activated just when CALL button is pressed and picture may not appear fully.



3. As shown, it is recommended that MC-D is installed at an entrance not exposed to direct sunlight and with 200 to 300 lux secured on the object.



4. Taking the adults' average height in consideration, please decide most suitable height of MC-D door station. It is suggested that the center of a camera lens be installed at an adults' average height minus 10 cm (4").



MAINTENANCE

1. Clean your MC-D unit with a soft cloth dampened with neutral household cleanser. Never use thinner nor benzine, etc.

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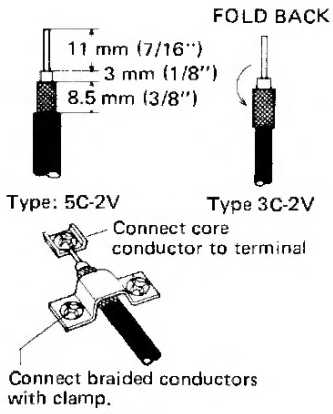
COAXIAL CABLE REQUIREMENTS

Use 5C-2V or 3C-2V OR RG-59/U which must meet the following specifications;

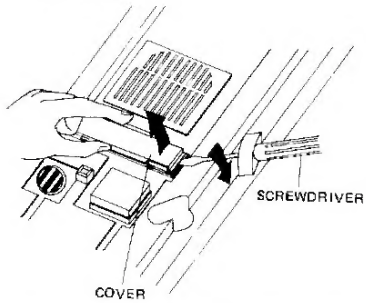
* Both core and braided conductors must be of copper (not of copper-weld).
* Impedance: 75 ohm.
* Permitted closed loop DC resistance: 7 ohm.
* Permitted attenuation: 6 dB at 4 MHz.
* Cable sheath size should not exceed 7.4 mm (5/16")

When using 3C-2V, strip the insulation and fold back the braided conductors, as shown to avoid shorting to core conductors.



DIRECTORY CARD REPLACEMENT

The six directory cards are supplied with the MC-D unit. When replacing the card, first remove front panel and the card cover can be removed, using a screwdriver.



4 INSTALLATION

(1) Gang box requirements;

For semi-flush mounting to new and plastered wall;

MC-D can be mounted on the 3-GANG BOX as specified below;

* 3-GANG BOX, 1-5/8" DEEP, with RAISED COVER, NEMA standards.
* 3-GANG BOX, SHALLOW, Tile Wall Box 1/2" knockouts, NEMA standards (available in U.S.A.).

OR

* JIS 3-SWITCH BOX (with cover) (Model: 3SSB, to be supplied by AIPHONE).

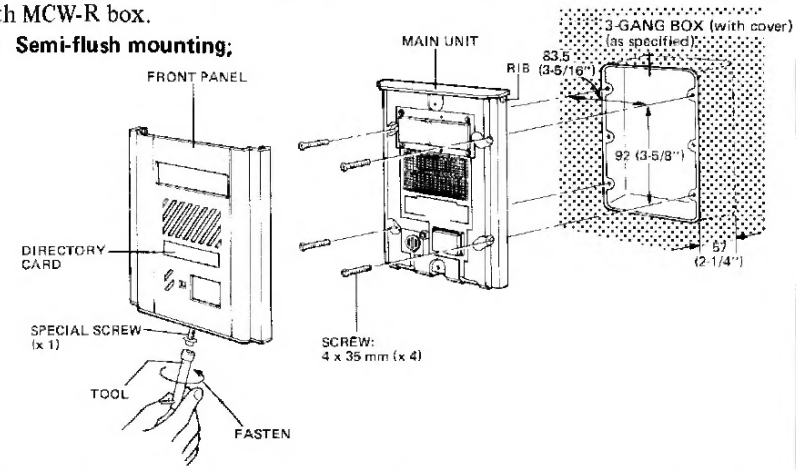
For semi-flush mounting (in existing constructions);

To mount MC-D on existing wall or on marble wall (where no plaster is used), use Aiphone's MCW-V box, without cover. Cut out a hole in the wall, of W: 95 mm x H: 155 mm (W: 3-3/4" x H: 6-1/8"), securing depth of 65 mm (2-9/16").

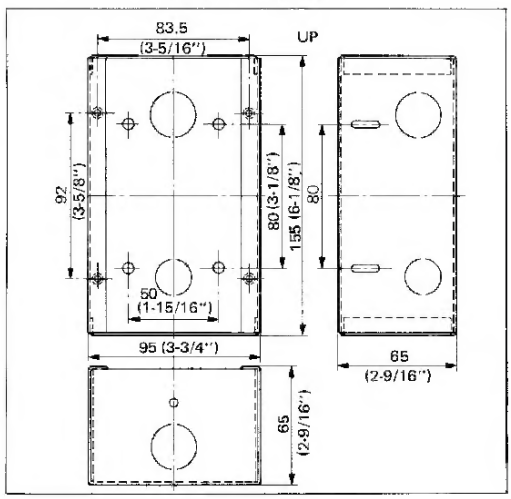
For surface mounting;

Aiphone supplies MCW-R box, especially designed for MC-D surface-mounting. For details, refer to the Instructions packed with MCW-R box.

(2) Semi-flush mounting;



MCW-V dimensions;



1. Loosen the oval head screw on bottom front panel by the provided tool.
2. Pull the front panel at bottom and remove from the main unit.
3. Connect wires on terminals on back of the main unit.
4. Mount the main unit on the gang box with the supplied four screws (4 mmϕ x 35 mm).
5. Attach the front panel to the main unit inserting to the rib provided on top main unit.
6. Rescrew the special screw on bottom front panel by the provided tool.

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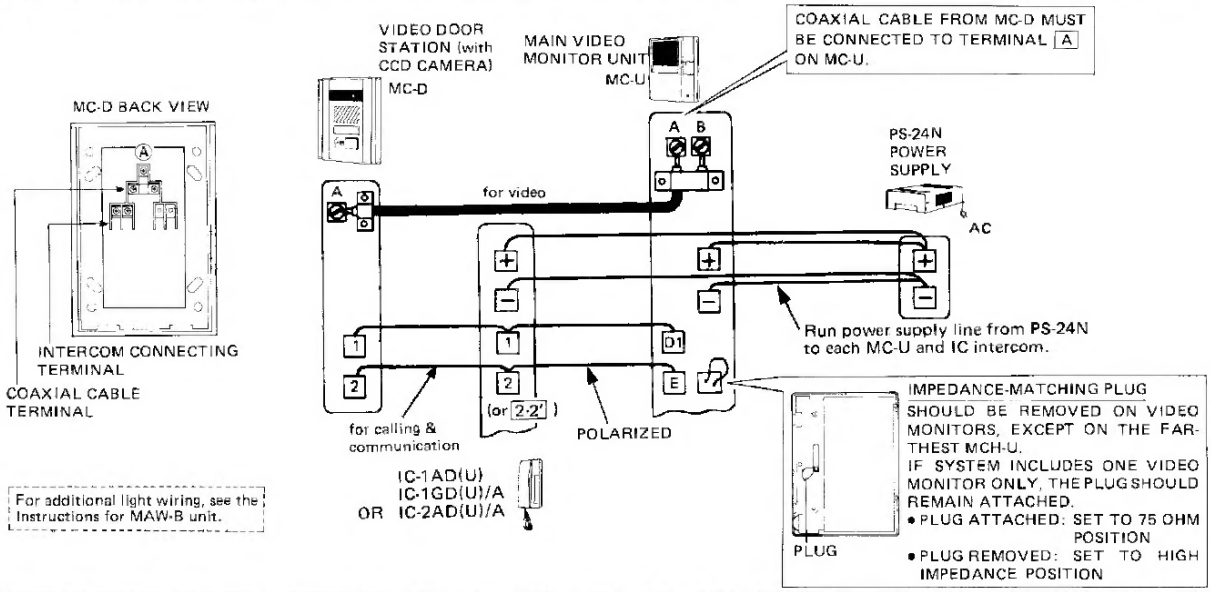
5 WIRING DIAGRAM


VIDEO DOOR STATION (with CCD CAMERA)
MC-D
MAIN VIDEO MONITOR UNIT
MC-U
COAXIAL CABLE FROM MC-D MUST BE CONNECTED TO TERMINAL A ON MC-U.
MC-D BACK VIEW
INTERCOM CONNECTING TERMINAL
COAXIAL CABLE TERMINAL
for video
PS-24N POWER SUPPLY
AC
Run power supply line from PS-24N to each MC-U and IC intercom.
for calling & communication
(or 2-2')
POLARIZED
IC-1AD(U)
IC-1GD(U)/A
OR IC-2AD(U)/A
For additional light wiring, see the Instructions for MAW-B unit.
IMPEDANCE-MATCHING PLUG
SHOULD BE REMOVED ON VIDEO MONITORS, EXCEPT ON THE FARTHEST MCH-U.
IF SYSTEM INCLUDES ONE VIDEO MONITOR ONLY, THE PLUG SHOULD REMAIN ATTACHED.
• PLUG ATTACHED: SET TO 75 OHM POSITION
• PLUG REMOVED: SET TO HIGH IMPEDANCE POSITION
PLUG

6 SPECIFICATIONS

* Power source: Supplied by MC-U main video monitor.
* Camera unit: **CCD** (charge-coupled device).
* Minimum illumination: 1 lux on the object . . . at a distance of 30 cm (1') or less.
  It is suggested to secure brightness of 200 to 300 lux in the dark area to obtain the best picture.
* Scanning line: 625/525 lines.
* Resolution: More than 300 TV lines vertically and horizontally.
* Object pickup range: Approx. 35.5 cm (14") vertically,
  Approx. 49 cm (19-5/16") horizontally, both at a distance of 50 cm (19-5/8").
* Calling: 2- or 4-stroke electronic chime.
* Wiring: One coaxial cable plus single pair of wires.
* Wiring distance:

For audio/video;

Coaxial cable; Wire gauge	3C-2V, 0.65 mm dia.	5C-2V, 0.65 mm dia.
Distance between MC-D and MC-U	50 m	150 m
Coaxial cable; Wire gauge	RG-59/U (22 GA), 22 AWG	RG-59/U (20 GA), 22 AWG
Distance between MC-D and MC-U	165'	490'

* MC-D dimensions: H:175mm × W:120 mm × D:25.5mm (recessed: 38mm)
  H:6-7/8" × W:4-3/4" × D:1" (recessed: 1-1/2").
* Weight: Approx. 680 g (1.5 lbs).

WARRANTY

Aiphone warrants its products to be free from defects of material and workmanship under normal use and service for a period of one year after delivery to the ultimate user and will repair free of charge or replace at no charge, should it become defective upon which examination shall disclose to be defective and under warranty. Aiphone reserves unto itself the sole right to make the final decision whether there is a defect in materials and/or workmanship; and whether or not the product is within the warranty.
This warranty shall not apply to any Aiphone product which has been subject to misuse, neglect, accident, or to use in violation of instructions furnished, nor extended to units which have been repaired or altered outside of the factory.
This warranty does not cover batteries or damage caused by batteries used in connection with the product.
This warranty covers bench repairs only, and any repairs must be made at the shop or place designated in writing by Aiphone. Aiphone will not be responsible for any costs incurred involving on site service calls.

Aiphone Co., Ltd., Nagoya, Japan
Aiphone Corporation, Bellevue, Washington

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Printed in Japan (E)

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